(2)

```
=> s phytostenol# or phytosterol# or sitostenol# or sitosterol# or sitostanol#

            1 PHYTOSTENOL#
         1357 PHYTOSTEROL#
            1 SITOSTENOL#
         9222 SITOSTEROL#
          255 SITOSTANOL#
L1       10088 PHYTOSTENOL# OR PHYTOSTEROL# OR SITOSTENOL# OR SITOSTEROL# OR
               SITOSTANOL#

=> s fatty(w)acid#

       228325 FATTY
           13 FATTIES
       228328 FATTY
                (FATTY OR FATTIES)
      2855220 ACID#
L2     205523 FATTY(W)ACID#

=> file medline embase wpids biosis

COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      14.39      14.54

FILE 'MEDLINE' ENTERED AT 10:19:46 ON 28 NOV 2000

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=> file caplus

COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       4.72      19.26

FILE 'CAPLUS' ENTERED AT 10:21:06 ON 28 NOV 2000
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FILE COVERS 1967 - 28 Nov 2000  VOL 133 ISS 23
FILE LAST UPDATED: 27 Nov 2000  (20001127/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.
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FILE 'MEDLINE, EMBASE, WPIDS, BIOSIS' ENTERED AT 10:19:46 ON 28 NOV 2000

FILE 'CAPLUS' ENTERED AT 10:21:06 ON 28 NOV 2000

FILE 'CAPLUS, MEDLINE, EMBASE, WPIDS, BIOSIS' ENTERED AT 10:22:13 ON 28 NOV 2000

L3 50209 S HYPOCHOLEST? OR LOWER?(W)CHOLESTEROL? OR REDUCT?(S)CHOLESTERO
L4 741 S L3 AND L1
L5 108 S L4 AND L2
L6 283 S CONJUGATED(W)FATTY(W)ACID#
L7 2 S L6 AND L5

=> s glyceride?

L8 82351 GLYCERIDE?

=> s l5 and l8

L9 16 L5 AND L8

=> d kwic l9 1

L9 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Effect of a high saturated fat and cholesterol diet supplemented with squalene or .beta.-**sitosterol** on lipoprotein profile in F1B hamsters
AB Male adult F1B hamsters (n=36) were fed for 4 wk a high-fat diet rich in satd. **fatty acids** composed of 90% chow diet, 10% coconut oil, and 0.05% cholesterol. The animals were then assigned to 3 dietary groups. . . high-fat diet; Group 2 the high-fat diet supplemented with 1% squalene, and Group 3 the high-fat diet supplemented with 0.5% .beta.-**sitosterol**. Squalene addn. to the high-fat diet did not modify the blood plasma lipoprotein levels. In Group 3 animals the plasma. . . Cholesterol absorption per se was not measured in this expt. Blood plasma triglyceride levels decreased in all lipoprotein fractions. Thus, .beta.-**sitosterol** had **hypocholesterolemic** and hypotriglyceridemic effects in these exptl. animals. Feeding squalene at 1% had no effect on blood plasma lipoprotein levels.
ST nutrition fat cholesterol **sitosterol** squalene blood lipoprotein
IT Blood plasma
Chylomicrons
Nutrition, animal
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)
IT **Glycerides**
Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)
IT Fats and Glyceridic oils
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(satd.; dietary satd. fat and cholesterol supplemented with squalene or

.beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT 57-88-5, Cholesterol
RL: BPR (Biological process); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT 83-46-5, .beta. **Sitosterol** 111-02-4, Squalene
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

=> d kwic ibib so l9 1-8

L9 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Effect of a high saturated fat and cholesterol diet supplemented with squalene or .beta.-**sitosterol** on lipoprotein profile in F1B hamsters
AB Male adult F1B hamsters (n=36) were fed for 4 wk a high-fat diet rich in satd. **fatty acids** composed of 90% chow diet, 10% coconut oil, and 0.05% cholesterol. The animals were then assigned to 3 dietary groups. . . high-fat diet; Group 2 the high-fat diet supplemented with 1% squalene, and Group 3 the high-fat diet supplemented with 0.5% .beta.-**sitosterol**. Squalene addn. to the high-fat diet did not modify the blood plasma lipoprotein levels. In Group 3 animals the plasma. . . Cholesterol absorption per se was not measured in this expt. Blood plasma triglyceride levels decreased in all lipoprotein fractions. Thus, .beta.-**sitosterol** had **hypocholesterolemic** and hypotriglyceridemic effects in these exptl. animals. Feeding squalene at 1% had no effect on blood plasma lipoprotein levels.
ST nutrition fat cholesterol **sitosterol** squalene blood lipoprotein
IT Blood plasma
Chylomicrons
Nutrition, animal
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT **Glycerides**
Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT Fats and Glyceridic oils
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(satd.; dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT 57-88-5, Cholesterol
RL: BPR (Biological process); FFD (Food or feed use); BIOL (Biological study); PROC (Process); USES (Uses)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

IT 83-46-5, .beta. **Sitosterol** 111-02-4, Squalene
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(dietary satd. fat and cholesterol supplemented with squalene or .beta.-**sitosterol** effects on blood plasma lipoprotein profiles in male adult F1B hamsters)

ACCESSION NUMBER: 2000:678338 CAPLUS
TITLE: Effect of a high saturated fat and cholesterol diet supplemented with squalene or .beta.-**sitosterol** on lipoprotein profile in F1B hamsters
AUTHOR(S): Smith, Donald; Espino-Montoro, Antonio; Perez-Jimenez, Francisco; Pedro-Botet, Juan; Pereperez, Jose Jimenez; Ordovas, Jose M.
CORPORATE SOURCE: Lipid Metabolism Laboratory, USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA, 02111, USA
SOURCE: Nutr. Res. (N. Y.) (2000), 20(9), 1309-1318
CODEN: NTRSDC; ISSN: 0271-5317
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Nutr. Res. (N. Y.) (2000), 20(9), 1309-1318
CODEN: NTRSDC; ISSN: 0271-5317
REFERENCE COUNT: 33
REFERENCE(S): (1) Andriamiarina, R; Ann Nutr Metab 1989, V33, P297 CAPLUS
(6) Grundy, S; J Lipid Res 1969, V10, P304 CAPLUS
(7) Grundy, S; J Lipid Res 1977, V18, P263 CAPLUS
(9) Ikeda, I; J Lipid Res 1988, V29, P1573 CAPLUS
(10) Ikeda, I; J Nutr Sci Vitaminol 1989, V35, P361 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Preperation of **phytosterol** and/or phytostanol derivatives for **redn.** of serum **cholesterol** and triglycerides
AB **Phytosterol** and/or phytostanol esters with polyunsatd. **fatty acids** having from 18 to 22 carbon atoms and at least three carbon-carbon double bonds are were prepd. as agents effective. . .
ST **phytosterol** phytostanol ester prepn **cholesterol** triglyceride **redn**; stigmasterol docosahexaenoate prepn anticholesteremic
IT **Fatty acids**, preparation
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyunsatd.; prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)
IT Anticholesteremic agents
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)
IT Sterols
RL: BAC (Biological activity or effector, except adverse); IMF (Industrial manufacture); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)
IT **Glycerides**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)
IT 272107-19-4P 272107-20-7P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)

IT 57-88-5, **Cholesterol**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)

IT 83-46-5 83-48-7, Stigmasterol 474-62-4, Campesterol 6217-54-5, Docosahexaenoic acid 10417-94-4 81926-94-5, Ethyl docosahexaenoate 86227-47-6, Ethyl eicosapentaenoate
RL: RCT (Reactant)
(prepn. of **phytosterol** and/or phytostanol derivs. for **redn.** of serum **cholesterol** and triglycerides)

ACCESSION NUMBER: 2000:367057 CAPLUS
DOCUMENT NUMBER: 133:17688
TITLE: Preperation of **phytosterol** and/or phytostanol derivatives for **redn.** of serum **cholesterol** and triglycerides
INVENTOR(S): Burdick, David Carl; Moine, Gerard; Raederstorff, Daniel; Weber, Peter
PATENT ASSIGNEE(S): F. Hoffmann-La Roche A.-G., Switz.
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1004594	A1	20000531	EP 1999-122978	19991119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000159792	A2	20000613	JP 1999-330770	19991122
NO 9905784	A	20000529	NO 1999-5784	19991125
AU 9960655	A1	20000601	AU 1999-60655	19991125
BR 9905398	A	20000808	BR 1999-5398	19991125
CN 1256277	A	20000614	CN 1999-124382	19991126
PRIORITY APPLN. INFO.:			EP 1998-122412	19981126
			EP 1999-119337	19990929

SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
REFERENCE COUNT: 5
REFERENCE(S):
(1) Eugster, C; US 5593691 A 1997
(2) Forbes Medi Tech Inc; WO 0004887 A 2000
(3) Mitchell, D; US 4588717 A 1986 CAPLUS
(4) Raision Tehtaat Oy Ab; WO 9806405 A 1998
(5) Shimada, Y; JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY 1999, V76(6), P713 CAPLUS

L9 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Replacing saturated fat with PUFA-rich (sunflower oil) or MUFA-rich (rape seed, olive, and high-oleic sunflower oil) fats resulted in comparable **hypocholesterolemic** effects in cholesterol-fed hamsters
AB Recent studies have suggested that monounsatd. **fatty acid** (MUFA)-rich dietary fats do not have the same blood plasma cholesterol-lowering effects whereby rapeseed oil was more effective than olive oil. This phenomenon could be explicable by the content of other **fatty acids** or plant sterols. To further evaluate the effects of different MUFA-rich oils (18:1-rich sunflower oil, rapeseed oil, olive oil) in. . . acid excretion. These data demonstrate that MUFA-rich dietary fats, e.g. rapeseed, olive, and 18:1-rich sunflower oil,
are comparable in their **hypocholesterolemic** potential and cause

similar effects on plasma cholesterol as 18:2-rich sunflower oil in hamsters when the dietary cholesterol intake is. . .

ST satd **fatty acid** plant oil nutrition cholesterol **hypocholesterolemia**

IT Nutrition, animal
(PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Olive oil
Rape oil
Sunflower oil
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Bile acids
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(bile acids influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Phospholipids, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(biliary lipids influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Lipids, biological studies
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(blood; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT **Glycerides**, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(blood; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(cholesterol-rich; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT **Fatty acids**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**fatty acid** compn. of PUFA-rich or MUFA-rich oils with comparable **hypocholesterolemic** effects)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(high-d.; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(low-d.; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT **Fatty acids**, biological studies
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(monounsatd.; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Sterols
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(plant sterols of PUFA-rich or MUFA-rich oils with comparable **hypocholesterolemic** effects)

IT **Fatty acids**, biological studies
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(polyunsatd.; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Palm oil
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(stearins; PUFA-rich or MUFA-rich oil with comparable

hypocholesterolemic effects)

IT Feces
(sterols in feces influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(very-low-d.; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT 27104-13-8 28984-77-2
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT 81-24-3, Taurocholic acid 360-65-6, Glycodeoxycholic acid 475-31-0, Glycocholic acid 516-35-8, Taurochenodeoxycholic acid 516-50-7, Taurodeoxycholic acid 640-79-9, Glycochenodeoxycholic acid
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(bile acids influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT 57-88-5, Cholest-5-en-3-ol (3.beta.)-, biological studies
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(blood; PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT 57-10-3, Hexadecanoic acid, biological studies 57-11-4, Octadecanoic acid, biological studies 143-07-7, Dodecanoic acid, biological studies 544-63-8, Tetradecanoic acid, biological studies 27213-43-0 28039-99-8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**fatty acid** compn. of PUFA-rich or MUFA-rich oils with comparable **hypocholesterolemic** effects)

IT 57-88-5, Cholesterol, biological studies 60-33-3, 9,12-Octadecadienoic acid (9Z,12Z)-, biological studies 112-80-1, 9-Octadecenoic acid (9Z)-, biological studies 506-32-1
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(liver lipids influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

IT 111-02-4, Squalene 474-67-9, Brassicasterol
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(plant sterols of PUFA-rich or MUFA-rich oils with comparable **hypocholesterolemic** effects)

IT 83-46-5, .beta.-**Sitosterol** 83-48-7, Stigmasterol 474-62-4, Campesterol
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(plant sterols of PUFA-rich or MUFA-rich oils with comparable **hypocholesterolemic** effects and fecal excretion)

IT 80-97-7, Cholestanol 360-68-9, Coprostanol
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(sterols in feces influenced by PUFA-rich or MUFA-rich oil with comparable **hypocholesterolemic** effects)

ACCESSION NUMBER: 1999:696907 CAPLUS
DOCUMENT NUMBER: 131:321933
TITLE: Replacing saturated fat with PUFA-rich (sunflower oil) or MUFA-rich (rape seed, olive, and high-oleic sunflower oil) fats resulted in comparable **hypocholesterolemic** effects in cholesterol-fed hamsters
AUTHOR(S): Trautwein, Elke A.; Rieckhoff, Dorte; Kunath-Rau, Angelika; Erbersdobler, Helmut F.
CORPORATE SOURCE: Institute Human Nutrition Food Science, Univ. Kiel, Kiel, D-24105, Germany
SOURCE: Ann. Nutr. Metab. (1999), 43(3), 159-172
CODEN: ANUMDS; ISSN: 0250-6807

PUBLISHER: S. Karger AG
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Ann. Nutr. Metab. (1999), 43(3), 159-172
CODEN: ANUMDS; ISSN: 0250-6807
REFERENCE COUNT: 41
REFERENCE(S): (2) Ausman, L; Comp Biochem Physiol 1993, V105B, P655 CAPLUS
(3) Beynen, A; Nutr Rep Int 1987, V35, P1327 CAPLUS
(4) Carey, M; J Lipid Res 1978, V19, P945 CAPLUS
(5) Clarke, R; Br Med J 1997, V314, P112 CAPLUS
(6) Dietschy, J; J Lipid Res 1993, V34, P1637 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Use of mixtures containing **phytostenols** for producing **hypocholesteremic** preparations
AB Mixts. of active agents contg. (a) **phytostenols** and/or **phytostenol** esters and (b) conjugated **fatty acids** or their **glycerides** are used to produce **hypocholesteremic** prepns. These mixts. have a synergistic effect in reducing the cholesterol content of serum. When encapsulated in gelatin, the prepns.. . . rats fed labeled cholesterol alone, and was also markedly lower than that in rats given either the phytostanol or the **fatty acid** alone.
ST **hypocholesteremic phytostenol** unsatd **fatty acid**; synergistic **hypocholesteremic phytostenol fatty acid**
IT Unsaturated **fatty acids**
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diunsatd., with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Sterol esters
Sterols
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(from plants; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT **Glycerides**, biological studies
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyunsatd. **fatty acid**-contg., with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Anticholesteremic agents
Butter
Capsules (drug delivery systems)
Cocoa products
Dietary food
Food
Margarine
Mayonnaise
Salad dressings
Sausage
Synergistic drug interactions
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Fats and Glyceridic oils, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)
IT Polyunsaturated **fatty acids**
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(with conjugated double bonds; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT **Fatty acid** esters
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with **phytostenols**; use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

IT 83-45-4, .beta.-**Sitostanol** 83-45-4D, .beta.-**Sitostanol**, esters 83-46-5 83-46-5D, esters 1839-11-8D, 9,11-Octadecadienoic acid, esters with **phytostenols** 41005-65-6 109033-78-5
RL: BAC (Biological activity or effector, except adverse); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of mixts. contg. **phytostenols** for producing **hypocholesteremic** prepns.)

ACCESSION NUMBER: 1999:344854 CAPLUS
DOCUMENT NUMBER: 130:347399
TITLE: Use of mixtures containing **phytostenols** for producing **hypocholesteremic** preparations
INVENTOR(S): Fabry, Bernd
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9925362	A1	19990527	WO 1998-EP7059	19981105
W: AU, BG, BR, BY, CA, CN, CZ, HU, ID, IS, JP, KR, LT, LV, MX, NO, NZ, PL, RO, RU, SI, SK, TR, UA, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19750453	A1	19990527	DE 1997-19750453	19971114
AU 9915603	A1	19990607	AU 1999-15603	19981105
EP 1028733	A1	20000823	EP 1998-959848	19981105
R: DE, ES, FR, GB, IT, NL				

PRIORITY APPLN. INFO.: DE 1997-19750453 19971114
WO 1998-EP7059 19981105

OTHER SOURCE(S): MARPAT 130:347399
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
REFERENCE COUNT: 7
REFERENCE(S):
(1) Funes; 1980, 5, CAPLUS
(2) Funes, C; AN ASOC QUIM ARGENT 1978, V66(5), P239
(3) Hasegawa; Hypocholesteraemic Effect of Linoleic Acid and Phytosterol 1984, 25, CAPLUS
(4) Hasegawa; JOSHI EIYO DAIGAKU KIYO 1983, V14, P165 CAPLUS
(5) Kosbab, J; WO 9833494 A 1998
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2000 ACS
AB . . . matter (USM) was analyzed by GLC to give 18 compds. consisting of a hydrocarbon mixt. in addn. to cholesterol and .beta.-**sitosterol**. GLC of the **fatty acid** Me esters (FAME) revealed the presence of palmitic, oleic and linoleic acids as the major **fatty acids** of the endocarp. Evaluation of the mucilage as oral hypoglycemic drug showed significant results, accompanied with obvious improvement in the. . .
ST Balanites aegyptiaca mucilage lipid pharmacol; hypoglycemic **hypocholesteremic** Balanites aegyptiaca component; triglyceride creatinine regulation Balanites aegyptiaca component

IT **Glycerides**, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(hypotriglyceridemics; Balanites aegyptiaca mucilage and lipid constituents and biol. evaluation)

IT 57-10-3, Hexadecanoic acid, biological studies 58-86-6, D-Xylose, biological studies 59-23-4, D-Galactose, biological studies 60-33-3, 9,12-Octadecadienoic acid (Z,Z)-, biological studies 83-46-5, .beta.-**Sitosterol** 111-02-4, Squalene 112-80-1, 9-Octadecenoic acid (Z)-, biological studies 112-95-8, n-Eicosane 142-62-1, Hexanoic acid, biological studies 147-81-9, Arabinose 544-63-8, Tetradecanoic acid, biological studies 544-76-3, n-Hexadecane 544-85-4, n-Dotriacontane 593-45-3, n-Octadecane 629-59-4, n-Tetradecane 629-62-9, n-Pentadecane 629-94-7, Heneicosane 629-97-0, n-Docosane 629-99-2, n-Pentacosane 630-01-3, n-Hexacosane 630-02-4, n-Octacosane 630-04-6, Hentriacontane 638-67-5, n-Tricosane 638-68-6, n-Triacontane 646-31-1, n-Tetracosane 685-73-4, D-Galacturonic acid 3458-28-4, D-Mannose 3615-41-6, Rhamnose
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(Balanites aegyptiaca mucilage and lipid constituents and biol. evaluation)

ACCESSION NUMBER: 1996:586511 CAPLUS
DOCUMENT NUMBER: 125:292739
TITLE: Mucilage and lipid constituents of Balanites aegyptiaca Del. and their biological evaluation
AUTHOR(S): Ibrahim, N.; Saeed, A.; Bashandy, S.; Omer, E.
CORPORATE SOURCE: Pharmaceutical Sciences, National Research Centre, Cairo, Egypt
SOURCE: Bull. Fac. Pharm. (Cairo Univ.) (1994), 32(3), 411-414
CODEN: BFPHA8; ISSN: 1110-0931
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Bull. Fac. Pharm. (Cairo Univ.) (1994), 32(3), 411-414
CODEN: BFPHA8; ISSN: 1110-0931

L9 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI Cholesterol malabsorption caused by **sitostanol** ester feeding and neomycin in pravastatin-treated hypercholesterolemic patients
AB Serum cholesterol values were insufficiently reduced by pravastatin in 2 different patient populations. Therefore, it was studied whether further **cholesterol redn.** could be achieved by inhibiting both **cholesterol** synthesis (by pravastatin) and absorption (by neomycin or **sitostanol** ester). Thus, serum cholesterol, cholesterol precursors (reflecting cholesterol synthesis), cholestanol and plant sterols (reflecting cholesterol absorption and biliary secretion) were.
. bypass during addnl. treatment with neomycin (1.5 g/day) and in another patient population of non-FH subjects during addnl. treatment with **sitostanol** ester (**sitostanol** transesterified with rapeseed oil **fatty acids**) (1.5 g/day). Addn. of neomycin to the regimen lowered serum total, LDL (low-d. lipoprotein)- and HDL (high-d. lipoprotein)-bound cholesterol by. . . and plant sterol:cholesterol ratios during the combined treatment were smaller in the subgroup with than without ileal bypass. Addn. of **sitostanol** ester did not lower serum total or LDL **cholesterol** nor the precursor:**cholesterol** ratios significantly, while the **redn.** in the plant sterols:**cholesterol** ratios was similar to that achieved with neomycin addn. These findings suggest that simultaneous inhibition of cholesterol synthesis and absorption very

effectively reduced serum cholesterol levels and that the addn. of neomycin or **sitostanol** ester reduced cholesterol absorption, while **sitostanol** ester reduced serum cholesterol and, compensatorily, increased cholesterol synthesis less consistently than neomycin.

ST cholesterol metab **sitostanol** neomycin pravastatin; hypercholesterolemia **sitostanol** neomycin pravastatin

IT **Glycerides**, biological studies
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(cholesterol precursors and metabolites response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(high-d., cholesterol precursors and metabolites response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

IT Lipoproteins
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(low-d., cholesterol precursors and metabolites response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

IT 83-45-4D, **Sitostanol**, esters 1404-04-2, Neomycin 81093-37-0, Pravastatin
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(cholesterol metab. response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

IT 80-97-7, Cholestanol 80-99-9, Lathosterol 83-46-5 111-02-4, Squalene 313-04-2, Desmosterol 474-62-4, Campesterol 566-97-2, .DELTA.8-Cholestenol
RL: BPR (Biological process); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(cholesterol precursors and metabolites response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

IT 57-88-5, Cholesterol, biological studies
RL: BPR (Biological process); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)
(hypercholesterolemia; cholesterol metab. response to pravastatin, **sitostanol**, and neomycin in humans with hypercholesterolemia)

ACCESSION NUMBER: 1995:267821 CAPLUS
DOCUMENT NUMBER: 122:46194
TITLE: Cholesterol malabsorption caused by **sitostanol** ester feeding and neomycin in pravastatin-treated hypercholesterolemic patients
AUTHOR(S): Vanhanen, H.
CORPORATE SOURCE: Second Department of Medicine, University of Helsinki, Helsinki, FIN-00290, Finland
SOURCE: Eur. J. Clin. Pharmacol. (1994), 47(2), 169-76
CODEN: EJCPAS; ISSN: 0031-6970
DOCUMENT TYPE: Journal
LANGUAGE: English

SO Eur. J. Clin. Pharmacol. (1994), 47(2), 169-76
CODEN: EJCPAS; ISSN: 0031-6970

L9 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2000 ACS

TI Effect of dietary olive oil non-**glyceride** fraction on plasma cholesterol level and liver phospholipid **fatty acid** composition

AB . . . suggesting that polyphenols might be responsible for suppressing the D5D activity. Previous reports by others have already shown that dietary **phytosterols** lower plasma CH level, whereas they enha the D5D activity. It is suggested that the **hypocholesterolem** and the D5D suppressing effects are 2 independent functions mc

different components in the virgin OLO.
ST olive oil diet plasma cholesterol; liver phospholipid **fatty acid** olive oil
IT Olive oil
RL: BIOL (Biological study)
(**glyceride**-free fraction of, cholesterol and liver phospholipids response to dietary)
IT **Fatty acids**, biological studies
RL: BIOL (Biological study)
(of phospholipids, of liver, nonglyceride fraction of dietary olive oil
effect on)
IT **Fatty acids**, biological studies
RL: BIOL (Biological study)
(polyunsatd., n-6, of phospholipids, of liver, nonglyceride fraction of
dietary olive oil effect on)
ACCESSION NUMBER: 1991:534851 CAPLUS
DOCUMENT NUMBER: 115:134851
TITLE: Effect of dietary olive oil non-**glyceride** fraction on plasma cholesterol level and liver phospholipid **fatty acid** composition
AUTHOR(S): Huang, Y. S.; Redden, P.; Lin, X.; Smith, R.; MacKinnon, S.; Horrobin, D. F.
CORPORATE SOURCE: Efamol Res. Inst., Kentville, NS, B4N 4H8, Can.
SOURCE: Nutr. Res. (N. Y.) (1991), 11(5), 439-48
CODEN: NTRSDC; ISSN: 0271-5317
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Nutr. Res. (N. Y.) (1991), 11(5), 439-48
CODEN: NTRSDC; ISSN: 0271-5317

L9 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI **Hypocholesterolemic** effect of gamma-linolenic acid as evening primrose oil in rats
AB The **hypocholesterolemic** effect of polyunsatd. **fatty acids** was compared in male rats given high-cholesterol [57-88-5] diets contg. either evening primrose oil (EPO, linoleic [60-33-3] plus .gamma.-linolenic [506-26-3]), safflower oil (SFO, linoleic) or olive oil
(OLO, low-linoleic) at the 10% level. EPO with a **phytosterol** content of 1.47% was more **hypocholesterolemic** than SFO (**phytosterols** 0.34%), and rats given EPO excreted more neutral (cholesterol and its metabolites) but not acidic steroids during the 1st 2
wk of the feeding. Even when the **phytosterol** content of EPO and SFO was adjusted to be the same (0.67%), EPO was still more **hypocholesterolemic** than SFO but to a lesser extent, although fecal neutral steroid excretion was comparable in these 2 dietary fat regimens. The results indicate a significant **hypocholesterolemic** efficacy of .gamma.-linolenic acid.
IT **Glycerides**, biological studies
Phospholipids
RL: BIOL (Biological study)
(of blood serum and liver, dietary .gamma.-linolenic acid effect on)
IT **Fatty acids**, biological studies
RL: BIOL (Biological study)
(of liver and adipose tissue, dietary .gamma.-linolenic acid effect on)
IT Phosphatidylcholines, biological studies
Phosphatidylethanolamines
RL: BIOL (Biological study)
(of liver, **fatty acids** of, .gamma.-linolenic acid of diet effect on)

ACCESSION NUMBER: 1986:551998 CAPLUS
DOCUMENT NUMBER: 105:151998
TITLE: **Hypocholesterolemic** effect of gamma-linolenic acid as evening primrose oil in rats
AUTHOR(S): Sugano, Michihiro; Ide, Takashi; Ishida, Takahiro; Yoshida, Katsuko
CORPORATE SOURCE: Sch. Agric., Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Ann. Nutr. Metab. (1986), 30(5), 289-99
CODEN: ANUMDS; ISSN: 0250-6807
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Ann. Nutr. Metab. (1986), 30(5), 289-99

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L9 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2000 ACS
AB . . . plasma levels of free and esterified plant sterols along with the
hypercholesterolemia. Introduction and maintenance of a diet low in **cholesterol** and plant sterols resulted in significant **redn**
. in the blood concn. of these sterols, which returned to pretreatment level upon discontinuation of the low sterol regimen. The. . .
IT Phospholipids
Fatty acids, biological studies
Glycerides, biological studies
RL: ANST (Analytical study)
(of blood plasma, of human with phytosterolemia)
IT **Sitosterols**
RL: ANST (Analytical study)
(metabolic disorders, sitosterolemia, diagnosis of, gas chromatog. of blood plasma lipids of humans in)
ACCESSION NUMBER: 1986:549098 CAPLUS
DOCUMENT NUMBER: 105:149098
TITLE: Usefulness of gas chromatographic profiles of plasma total lipids in diagnosis of phytosterolemia
AUTHOR(S): Kuksis, A.; Myher, J. J.; Marai, L.; Little, J. A.; McArthur, R. G.; Roncari, D. A. K.
CORPORATE SOURCE: Banting and Best Dep. Med. Res., Univ. Toronto, Toronto, ON, M5G 1L6, Can.
SOURCE: J. Chromatogr. (1986), 381(1), 1-12
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
SO J. Chromatogr. (1986), 381(1), 1-12
CODEN: JOCRAM; ISSN: 0021-9673

L9 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2000 ACS
TI **Hypocholesterolemic** activity of **phytosterol**. II
AB The **hypocholesterolemic** activities of **phytosterols** and related compds. were compared in rats receiving a 3% cholesterol [57-88-5]- contg. diet. The rats were i.v. injected for 5 days with emulsions of saline-albumin contg. each sterol. The greatest effect on lowering liver cholesterol, triglyceride, and **fatty acid** levels was shown by stigmasterol (I) [83-48-7], followed by .beta.-**sitosterol** [83-46-5], stigmastanol [83-45-4], ergosterol [57-87-4] and 7-ketocholesterol [566-28-9]. On the other hand, I palmitate [2308-84-1] and I stearate [23838-16-6] showed. . . or phenobarbital-treated rats which had been given I. The presence of a free
hydroxy group at the C-3 position in **phytosterols** is apparently necessary for the **hypocholesterolemic** activities and a double bond at the C-5 position and a side-chain at the C-17 position, may also relate to. . .
ST **phytosterol hypocholesterolemic**; stigmasterol **hypocholesterolemic**
IT Liver, composition
(cholesterol of, **phytosterols** effect on)
IT **Fatty acids**, biological studies
Glycerides, biological studies
RL: BIOL (Biological study)
(of liver, **phytosterols** effect on)

IT Anticholesteremics and Hypolipemics
(**phytosterols** as, structure in relation to)
IT Molecular structure-biological activity relationship
(anticholesteremic, of **phytosterols**)
IT 9035-51-2, biological studies
RL: BIOL (Biological study)
(of liver microsomes, **phytosterols** effect on)
IT 57-88-5, biological studies
RL: BIOL (Biological study)
(of liver, **phytosterols** effect on)
ACCESSION NUMBER: 1980:560958 CAPLUS
DOCUMENT NUMBER: 93:160958
TITLE: **Hypocholesterolemic** activity of **phytosterol**. II
AUTHOR(S): Tabata, Toshikazu; Tanaka, Mitsuo; Iio, Toshihiro
CORPORATE SOURCE: Showa Coll. Pharm. Sci., Tokyo, Japan
SOURCE: Yakugaku Zasshi (1980), 100(5), 546-52
CODEN: YKKZAJ; ISSN: 0372-7750
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
SO Yakugaku Zasshi (1980), 100(5), 546-52
CODEN: YKKZAJ; ISSN: 0372-7750

L9 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2000 ACS
AB . . . rats on a high I diet, triparanol was nearly as effective as II in preventing increases in serum I. Thyroxine, .beta.-**sitosterol**, and benzmalecene had a similar but weaker action. In some cases, gain in body wt. was inhibited by triparanol and. . . rat livers but not its formation from mevalonic acid. II had no effect on production of acetone bodies or of **fatty acids** in rat liver homogenates.
ST hydroxamates tissue lipids; tissue lipids hydroxamates; lipids tissue hydroxamates; benzylcarbethoxyhydroxamates **hypocholesterolemic**; **hypocholesterolemic** benzylcarbethoxyhydroxamates
IT Blood serum
(cholesterol and **glycerides** of, in atherosclerosis, benzyl benzylcarbethoxyhydroxamate effect on)
IT **Glycerides**, biological studies
RL: BIOL (Biological study)
(of blood serum, in atherosclerosis, benzyl benzylcarbethoxyhydroxamate effect on)
ACCESSION NUMBER: 1970:77286 CAPLUS
DOCUMENT NUMBER: 72:77286
TITLE: Influence of benzyl N-benzyl carbethoxyhydroxamate, W-398, on tissue lipids of rats and rabbits
AUTHOR(S): Douglas, Fielding; Ludwig, Bernard J.; Margolin, S.; Berger, Frank M.
CORPORATE SOURCE: Wallace Labs. Div., Carter-Wallace, Inc., Cranbury, N. J., USA
SOURCE: Progr. Biochem. Pharmacol. (1967), 2, 422-31
CODEN: PBPHAW
DOCUMENT TYPE: Journal
LANGUAGE: English
SO Progr. Biochem. Pharmacol. (1967), 2, 422-31
CODEN: PBPHAW

L9 ANSWER 12 OF 16 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
TI Effect of dietary olive oil non-**glyceride** fraction on plasma cholesterol level and liver phospholipid **fatty acid** composition.
AB . . . indicated that the components in OLO responsible for suppressing both plasma CH and D5D activity are contained mainly in the non-**glyceride** fraction. Among various components examined, squalene or

polyphenolic acids (caffeic, vanillic and protocatechuic acids) failed to affect either plasma CH. . . suggesting that polyphenols might be responsible for suppressing the D5D activity. Previous reports by others have already shown that dietary **phytosterols** lower plasma OH level whereas they enhance the D5D activity. It is suggested that the **hypocholesterolemic** and the D5D suppressing effects are two independent functions modulated by different components in the virgin OLO.

CT Medical Descriptors:
*liver
animal experiment
animal tissue
article
male
nonhuman
plasma
priority journal
rat
*cholesterol: EC, endogenous compound
*olive oil
*phospholipid: EC, endogenous compound
***sitosterol: EC, endogenous compound**

RN (cholesterol) 57-88-5; (olive oil) 8001-25-0; (**sitosterol**) 19044-06-5, 83-46-5

ACCESSION NUMBER: 91184856 EMBASE
DOCUMENT NUMBER: 1991184856
TITLE: Effect of dietary olive oil non-**glyceride** fraction on plasma cholesterol level and liver phospholipid **fatty acid** composition.
AUTHOR: Huang Y.-S.; Redden P.; Lin X.; Smith R.; MacKinnon S.; Horrobin D.F.
CORPORATE SOURCE: Efamol Research Institute,Kentville, NS B4N 4H8, Canada
SOURCE: Nutrition Research, (1991) 11/5 (439-448).
ISSN: 0271-5317 CODEN: NTRSDC
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

SO Nutrition Research, (1991) 11/5 (439-448).
ISSN: 0271-5317 CODEN: NTRSDC

L9 ANSWER 13 OF 16 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

TI **Phytosterol** and/or phytostanol esters made from **phytosterols** and/or phytostanols with polyunsaturated **fatty acids**, used in human diet and diet-food to lower serum cholesterol and triglycerides levels.

AB NO 9905784 UPAB: 20001010
NOVELTY - **Phytosterol** and/or phytostanol esters made from **phytosterols** and/or phytostanols with polyunsaturated **fatty acids** (PUFAs) containing 18-22 C atoms and at least three unsaturated C=C bonds.
ACTIVITY - Serum cholesterol lowering; serum triglyceride. . . control diet (1% coconut oil and 1% corn oil) was replaced by 2 weight/weight % of the following: (2) 2% **sitosterol** mix/high oleic sunflower oil (1:1); (3) 2% **sitostanol**-DHA ester; (4) 2% stigmasterol-EPA ester; and (5) 2% **sitosterol** mix + EPA/DHA ester (1:1). The rats were allowed free access to water and diet and were maintained on a. . . or food consumption. The plasma cholesterol was significantly lower by 28% to 46% in all the four groups treated with **phytosterols** relative to control and by 46% to 66% relative to the pre-treatment period (week 0). The high-density lipoprotein (HDL) cholesterols were almost not affected by the treatment with **phytosterols**; thus the non-HDL cholesterol - very low density

lipoprotein (VLDL) and low-density lipoprotein (LDL) cholesterol - were mainly lowered by **phytosterol** treatment. The plasma triglycerides were significantly lowered by 18% to 39% in the groups treated with **phytosterol** combined with n-3 **fatty acids** relative to the control group and by 15% to 41% relative to the pre-treatment period (week 0), whereas **phytosterol** combined with vegetable oil did not significantly lower plasma triglyceride.

USE - The esters are used in human diet. . . cholesterol levels and serum triglycerides levels in humans (claimed).

ADVANTAGE - The esters may be used as a combined **cholesterol reduction** agent and triglyceride lowering agent and thus positively affect two of the major risk factors for cardiovascular disease.

Dwg.0/0

ABEQ CA 2290331 UPAB: 20001006

NOVELTY - **Phytosterol** and/or phytostanol esters made from **phytosterols** and/or phytostanols with polyunsaturated **fatty acids** (PUFAs) containing 18-22 C atoms and at least three unsaturated C=C bonds.

ACTIVITY - Serum cholesterol lowering; serum triglyceride. . . control diet (1% coconut oil and 1% corn oil) was replaced by 2 weight/weight % of the following: (2) 2% **sitosterol** mix/high oleic sunflower oil (1:1); (3) 2% **sitostanol**-DHA ester; (4) 2% stigmasterol-EPA ester; and (5) 2% **sitosterol** mix + EPA/DHA ester (1:1). The rats were allowed free access to water and diet and were maintained on a. . . or food consumption. The plasma cholesterol was significantly lower by 28% to 46% in all the four groups treated with **phytosterols** relative to control and by 46% to 66% relative to the pre-treatment period (week 0). The high-density lipoprotein (HDL) cholesterols were almost not affected by the treatment with **phytosterols**; thus the non-HDL cholesterol - very low density lipoprotein (VLDL) and low-density lipoprotein (LDL) cholesterol - were mainly lowered by **phytosterol** treatment. The plasma triglycerides were significantly lowered by 18% to 39% in the groups treated with **phytosterol** combined with n-3 **fatty acids** relative to the control group and by 15% to 41% relative to the pre-treatment period (week 0), whereas **phytosterol** combined with vegetable oil did not significantly lower plasma triglyceride.

USE - The esters are used in human diet. . . cholesterol levels and serum triglycerides levels in humans (claimed).

ADVANTAGE - The esters may be used as a combined **cholesterol reduction** agent and triglyceride lowering agent and thus positively affect two of the major risk factors for cardiovascular disease.

Dwg.0/0

TECH UPTX: 20001114

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compounds: The **phytosterol** is beta-**sitosterol**, stigmasterol and/or campesterol, preferably beta-**sitosterol** and/or stigmasterol, most preferably beta-**sitosterol**. The phytostanol is campestanol and/or beta-**sitostanol**, preferably beta-**sitostanol**. The polyunsaturated **fatty acid** is eicosapentaenoic acid (EPA) or docosahexaenoic (DHA) acid. The esters further comprise, in admixture, esters of **phytosterol** and/or phytostanol with **fatty acids** other than the above-described PUFAs and/or free **phytosterols**/phytostanols and/or PUFA **glycerides** or esters.

Preparation: The esters are obtained by interesterification of free **phytosterols**/phytostanols with **fatty acids** of a 18-22C n-3 polyunsaturated **fatty acid** containing at least three unsaturated C=C double bonds by heating in the presence of an interesterification catalyst in which (i). . .

TT TT: **PHYTOSTEROL** MADE POLYUNSATURATED **FATTY ACID** HUMAN DIET DIET FOOD LOWER SERUM CHOLESTEROL LEVEL.

ACCESSION NUMBER: 2000-420751 [36] WPIDS
DOC. NO. CPI: C2000-158958
TITLE: **Phytosterol** and/or phytostanol esters made from **phytosterols** and/or phytostanols with polyunsaturated **fatty acids**, used in human diet and diet-food to lower serum cholesterol and triglycerides levels.
DERWENT CLASS: B01 D13
INVENTOR(S): BURDICK, D C; MOINE, G; RAEDERSTORFF, D; WEBER, P; MOINET, G
PATENT ASSIGNEE(S): (HOFF) HOFFMANN LA ROCHE & CO AG F
COUNTRY COUNT: 31
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
NO 9905784	A	20000529	(200036)*		
AU 9960655	A	20000601	(200036)		
JP 2000159792	A	20000613	(200039)		10
BR 9905398	A	20000808	(200044)		
EP 1004594	A1	20000531	(200045)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
CN 1256277	A	20000614	(200048)		
CA 2290331	A1	20000526	(200049)B	EN	21

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
NO 9905784	A	NO 1999-5784	19991125
AU 9960655	A	AU 1999-60655	19991125
JP 2000159792	A	JP 1999-330770	19991122
BR 9905398	A	BR 1999-5398	19991125
EP 1004594	A1	EP 1999-122978	19991119
CN 1256277	A	CN 1999-124382	19991126
CA 2290331	A1	CA 1999-2290331	19991119

PRIORITY APPLN. INFO: EP 1999-119337 19990929; EP 1998-122412 19981126

L9 ANSWER 14 OF 16 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Preparation of **hypocholesterinemic** agents.
AB DE 19750453 UPAB: 19990714
NOVELTY - The preparation of a **hypocholesterinemic** agent (A) comprises mixing: (a) **phytostenol** and/or **phytostenol** ester; and (b) **fatty acids** with 6-24C and at least two conjugated double bonds, especially their **glycerides**.
USE - (A) is used to lower the cholesterol levels in mammal serum.
TECH UPTX: 19990714
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred materials: (a) is especially beta-**sitostenol**, beta-**sitostanol** or their esters, especially beta-**sitostanol** with carbonic acids of formula (I), R1COOH (I).
R1CO = aliphatic, optionally linear 2-22C acyl rest with 1-3 double bonds
. (b0 are **fatty acids** of 12-18C, especially conjugated linol acid. (A) is encapsulated in gelatin. (a) and (b) make up 0.1-50 weight % of. . .
ACCESSION NUMBER: 1999-314061 [27] WPIDS
DOC. NO. CPI: C1999-092951
TITLE: Preparation of **hypocholesterinemic** agents.
DERWENT CLASS: B01 B05 D13

INVENTOR(S): FABRY, B
PATENT ASSIGNEE(S): (HENK) HENKEL KGAA; (COGN-N) COGNIS DEUT GMBH
COUNTRY COUNT: 43
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19750453	A1	19990527	(199927)*		5
WO 9925362	A1	19990527	(199928)	GE	
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU BG BR BY CA CN CZ HU ID IS JP KR LT LV MX NO NZ PL RO RU SI SK TR UA US					
AU 9915603	A	19990607	(199943)		
EP 1028733	A1	20000823	(200041)	GE	
R: DE ES FR GB IT NL					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19750453	A1	DE 1997-19750453	19971114
WO 9925362	A1	WO 1998-EP7059	19981105
AU 9915603	A	AU 1999-15603	19981105
EP 1028733	A1	EP 1998-959848	19981105
		WO 1998-EP7059	19981105

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9915603	A	Based on	WO 9925362
EP 1028733	A1	Based on	WO 9925362

PRIORITY APPLN. INFO: DE 1997-19750453 19971114

L9 ANSWER 15 OF 16 BIOSIS COPYRIGHT 2000 BIOSIS
TI EFFECT OF DIETARY OLIVE OIL NON-**GLYCERIDE** FRACTION ON PLASMA CHOLESTEROL LEVEL AND LIVER PHOSPHOLIPID **FATTY ACID** COMPOSITION.
AB. . . indicated that the components in OLO responsible for suppressing both plasma CH and D5D activity are contained mainly in the non-**glyceride** fraction. Among various components examined, squalene or polyphenolic acids (caffeic, vanillic and protocatechuic acids) failed to affect either plasma CH. . . suggesting that polyphenols might be responsible for suppressing the D5D activity. Previous reports by others have already shown that dietary **phytosterols** lower plasma CH level whereas they enhance the D5D activity. It is suggested that the **hypocholesterolemic** and the D5D suppressing effects are two independent functions modulated by different components in the virgin OLO.
IT Miscellaneous Descriptors
HUMAN ANIMAL BETA **SITOSTEROL**
RN 57-88-5 (CHOLESTEROL)
83-46-5 (BETA **SITOSTEROL**)
ACCESSION NUMBER: 1991:252819 BIOSIS
DOCUMENT NUMBER: BA91:133374
TITLE: EFFECT OF DIETARY OLIVE OIL NON-**GLYCERIDE** FRACTION ON PLASMA CHOLESTEROL LEVEL AND LIVER PHOSPHOLIPID **FATTY ACID** COMPOSITION.
AUTHOR(S): HUANG Y-S; REDDEN P; LIN X; SMITH R; MACKINNON S; HORROBIN D F
CORPORATE SOURCE: EFAMOL RES. INST., KENTVILLE, NOVA SCOTIA, CANADA B4N 4H8.
SOURCE: NUTR RES, (1991) 11 (5), 439-448.
CODEN: NTRSDC. ISSN: 0271-5317.

FILE SEGMENT: BA; OLD
LANGUAGE: English
SO NUTR RES, (1991) 11 (5), 439-448.
CODEN: NTRSDC. ISSN: 0271-5317.

L9 ANSWER 16 OF 16 BIOSIS COPYRIGHT 2000 BIOSIS
AB The **hypocholesterolemic** activities of **phytosterols** and related compounds were compared in rats receiving a 3%-cholesterol containing diet. The rats were i.v. injected for 5 days with emulsions of saline-albumin containing each sterol. The greatest effect on lowering liver cholesterol, triglyceride and **fatty acid**-levels was shown by stigmasterol, followed by .beta.-**sitosterol**, stigmastanol, ergosterol and 7-keto-cholesterol. Esters of stigmasterol, e.g., palmitate and stearate, showed considerably lower activity than free stigmasterol. No effect. . . could be seen in stigmasterol acetate, which is not found in nature. The decrease of liver cholesterol by treatment with **phytosterols** depended on its esterified form. After injection, stigmasterol in liver was present mainly in a free form and the palmitate. . . normal or phenobarbital-treated rats which were given stigmasterol. The presence of a free hydroxy group at the C-3 position in **phytosterols** may be necessary for the **hypocholesterolemic** activities and a double bond at the C-5 position and a side-chain at the C-17 position may also relate to. . .

IT . . .
LIVER HEPATIC MICROSOME STIGMA STEROL BETA SITO STEROL STIGMASTANOL ERGOSTEROL 7 KETO CHOLESTEROL PHENO BARBITAL METABOLIC-DRUG CYTOCHROME P-450 CHOLESTEROL TRI **GLYCERIDE** FREE **FATTY-ACID** PALMITATE STEARATE PHARMACODYNAMICS

ACCESSION NUMBER: 1981:135105 BIOSIS
DOCUMENT NUMBER: BA71:5097
TITLE: HYPO CHOLESTEROLEMIC ACTIVITY OF PHYTO STEROL 2.
AUTHOR(S): TABATA T; TANAKA M; IIO T
CORPORATE SOURCE: SHOWA COLL. PHARM. SCI., 1-8 TSURUMAKI-5-CHOME, SETAGAYA, TOKYO, JPN.
SOURCE: YAKUGAKU ZASSHI, (1980) 100 (5), 546-552.
CODEN: YKKZAJ. ISSN: 0372-7750.
FILE SEGMENT: BA; OLD
LANGUAGE: Japanese
SO YAKUGAKU ZASSHI, (1980) 100 (5), 546-552.